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EXAMINER

VILLECCO, JOHN M

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/922,252 | <b>Applicant(s)</b><br>TSENG ET AL. |  |
|                              | <b>Examiner</b><br>JOHN M. VILLECCO  | <b>Art Unit</b><br>2622             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7,8,11-14,16-20,22,26 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2,11,16,17,26 and 28 is/are allowed.
- 6) ☒ Claim(s) 4,5,7,8,12-14,18-20,22,29 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 29, 2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims, 4, 5, 7, 8, 12-14, 18-20, 22, 29, and 30 have been considered but are moot in view of the new ground(s) of rejection. Please see the new grounds of rejection presented on the following pages.

3. Additionally, applicant is correct in their assumption that claim 12 was incorrectly indicated as being allowable. Clearly, since there was an art rejection of claim 12, this was inadvertently indicated as being allowable.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 12 recites the limitation "the optical scanner" in line 3. There is insufficient antecedent basis for this limitation in the claim.

7. Claims 13 and 14 are rejected based on their dependency to claim 12.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 4, 5, 7, 8, 12-14, 18-20, 22, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingetsu et al. (U.S. Patent No. 6,181,379) in view of Misawa et al. (U.S. Patent No. 5,041,852).**

10. Regarding *claim 4*, Kingetsu discloses a camera capable of taking pictures of landscapes and also capable of taking pictures of documents. More specifically and as it relates to the applicant's claims, Kingetsu discloses a document platform (document table, 5A), a light source (6) to generate light for reflecting from the document, a driving mechanism to drive movement of a movable component (the document table is moveable), directing light to a light sensing device (line sensor, 11), and an optical component (scan mirror, 14) located on a light path for

the reflected light, the optical component configured to pivot. See Figure 16 and column 10, lines 54-65.

Additionally, Kingetsu mentions that the vibrations of the camera are an issue that needs to be corrected. See column 4, lines 34-54. Kingetsu, however, fails to explicitly disclose measuring vibration associated with the light sensing device using a vibration sensor, converting the measured vibration into an actuator signal, and adjusting a light path by repositioning the optical component according to the actuator signal. Misawa, on the other hand, discloses a camera with just such an arrangement. More specifically, Misawa discloses using a vibration sensor (shake detector sensor, 90) to measure the vibration of the camera, using an operation circuit (94) to convert the detected vibration into an actuator signal for moving the mirror (12) (see column 13, lines 27-35), and adjusting the light path by repositioning the optical component (mirror, 12) to maintain the position of the light on the light sensing device. Misawa discloses that this arrangement allows for the correction of the shake of a camera. Therefore, it would have been obvious to one of ordinary skill in the art to implement just such a shake correction device in the camera of Kingetsu so that an image free of distortion is captured.

11. As for **claim 5**, Misawa discloses that the mirror is pivoted according to the actuator signal. In particular, Misawa discloses that the incline of the mirror (12) is adjusted according to the actuator signal from the operation circuit (94). See column 13, lines 35-45. It is inherent that if one changes the inclination of the mirror that it has to be pivoted about some point.

12. With regard to **claim 18**, Misawa discloses that the vibration correction device operates to reduce the vibration to zero (col. 13, line 34). Thus, the impinging light would always be at constant fixed location on the image sensor.

13. Regarding *claim 19*, Misawa discloses that light path is adjusted to correct for the measured vibration independently of whether the light sensing device is adjustable. Since the light sensing device of Misawa is not adjustable, the light path is corrected according to the measuring vibration independently.

14. As for *claim 20*, Misawa discloses that the vibration sensor measures vibration in the x-direction. See column 13, line 30.

15. With regard to *claim 7*, Kingetsu discloses a camera capable of taking pictures of landscapes and also capable of taking pictures of documents. More specifically and as it relates to the applicant's claims, Kingetsu discloses a means for supporting a document (document table, 5A), means for reflecting light from a portion of the document (scan mirror, 14, and light source, 6), means for driving movement of a movable component of the apparatus to control the portion of the document which reflects light (the document table is moveable), and means for guiding (scan mirror, 14) the reflected light to a light sensing device (line sensor, 11).

Additionally, Kingetsu mentions that the vibrations of the camera are an issue that needs to be corrected. See column 4, lines 34-54. Kingetsu, however, fails to explicitly disclose means for sensing a vibration of the light sensing device of the apparatus, means for converting the vibration to an actuator signal, and means for adjusting an optical assembly of the apparatus according to the actuator signal. Misawa, on the other hand, discloses a camera with just such an arrangement. More specifically, Misawa discloses using a vibration sensor (shake detector sensor, 90) to measure the vibration of the camera, using an operation circuit (94) to convert the detected vibration into an actuator signal for moving the mirror (12) (see column 13, lines 27-35), and adjusting the light path by repositioning the optical component (mirror, 12) to maintain

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the position of the light on the light sensing device. Misawa discloses that this arrangement allows for the correction of the shake of a camera. Therefore, it would have been obvious to one of ordinary skill in the art to implement just such a shake correction device in the camera of Kingetsu so that an image free of distortion is captured.

16. Regarding *claim 8*, Misawa discloses that a mirror (12) is adjusted in response to the actuator signal. See column 13, lines 28-45.

17. As for *claim 22*, Misawa discloses that the means for detecting vibration is a means for detecting movement (shake) of the camera. See column 13, lines 20-45.

18. With regard to *claim 29*, Misawa discloses the use of scan mirror (14) to reflect light from the document.

19. Regarding *claim 12*, Kingetsu discloses a camera capable of taking pictures of landscapes and also capable of taking pictures of documents. More specifically and as it relates to the applicant's claims, Kingetsu discloses a document platform (document table, 5A), a light source (6) to generate light for reflecting from the document, a driving mechanism to drive movement of a movable component (the document table is moveable), directing light to a light sensing device (line sensor, 11), and an optical assembly (scan mirror, 14).

Kingetsu, however, fails to explicitly disclose a vibration sensor to detect vibration of the light sensing device and produce a corresponding control signal, or that the optical assembly is configured to correct for the detected vibration of the light sensing device according to the corresponding control signal. Misawa, on the other hand, discloses a camera with just such an arrangement. More specifically, Misawa discloses using a vibration sensor (shake detector sensor, 90) to measure the vibration of the camera, using an operation circuit (94) to convert the

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detected vibration into an actuator signal for moving the mirror (12) (see column 13, lines 27-35), and adjusting the light path by repositioning the optical component (mirror, 12) to maintain the position of the light on the light sensing device. Misawa discloses that this arrangement allows for the correction of the shake of a camera. Therefore, it would have been obvious to one of ordinary skill in the art to implement just such a shake correction device in the camera of Kingetsu so that an image free of distortion is captured.

20. As for *claim 13*, Misawa discloses the use of a mirror (12).

21. As for *claim 14*, both Kingetsu (col. 2, lines 40-45) and Misawa (col. 15, lines 4-10) disclose the use of a CCD.

22. **Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kingetsu et al. (U.S. Patent No. 6,181,379) in view of Misawa et al. (U.S. Patent No. 5,041,852) and further in view of Hayakawa (U.S. Patent No. 6,130,993).**

23. As mentioned previously in the discussion of claim 29, the combination of Kingetsu and Misawa disclose all of the limitations of the parent claim. The aforementioned references, however, fail to explicitly disclose that the reflecting means includes a plurality of mirrors. Hayakawa, on the other hand, discloses that it is well known in the art that when correcting for shake, a plurality of mirrors is commonly used. More specifically, Hayakawa discloses an embodiment in which two mirrors are used to reflect light to the imaging device. See Figure 7 and column 3, line 35 to column 4, line 65. Hayakawa discloses that this is beneficial because it corrects for shake in both the x and y directions. Therefore, it would have been obvious to use two mirrors in the camera of Kingetsu and Misawa to correct for shake in the x and y directions.



***Allowable Subject Matter***

24. Claims 1, 2, 11, 16, 16, 26, and 28 are allowed.
25. The following is an examiner's statement of reasons for allowance:
26. Regarding claim 1, the primary reason for allowance is that the prior art fails to teach or reasonably suggest a vibration sensor included in the arrangement of claim 1 that detects the vibration that is caused by the driving mechanism.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. VILLECCO whose telephone number is (571)272-7319. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN M. VILLECCO/  
Primary Examiner, Art Unit 2622  
June 20, 2008